URGE

Unlearning Racism in Geoscience

VT VIRGINIA TECH

URGE Demographic Data for Virginia Tech Geosciences

Below, we describe what was found by the Virginia Tech Geosciences Pod on demographic data (public and internal facing), as well as stated goals for representation, and/or proposals to collect and report demographic data.

The links to demographic data at our organization are here:

[Virginia Tech: University Data Commons](#)

The website linked above contains demographic data down to the department/program level on the following:
- Current undergraduate and graduate students, faculty, and staff demographics (2011-2012 academic year to present)
- Demographics on undergraduate and graduate program applicants, applicants who received offers, and applicants who ultimately enrolled in programs (2001-2002 academic year to present)
- Undergraduate and graduate degrees conferred (2010-2011 academic year to present)
- Undergraduate and graduate student time to degree 2010-2011 academic year - present)
- Undergraduate and graduate student graduation and retention rates (2014 - present)

[Demographic Data for Virginia Tech's Department of Geosciences](#)

The linked document above includes:
- All the above data from the University Data Commons for our department*
- Demographic data on the speakers in our department's seminar series**

We note that the race/ethnicity statistics do not include international students and faculty: they are just noted as international in the database.

**Although the seminar-speaker data we compiled provides a general picture, it is likely neither wholly accurate nor complete because in many cases this data was based on our assumptions of the identities of individuals when public data was not available. An additional outcome of this discussion is to design and implement a survey mechanism for both our past and future speakers/visitors to help us collect information that is both accurate and respectful of how individuals identify themselves.*

How does your organization compare to others, or to the field as a whole?

We compared our undergraduate and graduate student demographic data to other geosciences departments at universities considered to be peer institutions of Virginia Tech by the State Council of Higher Education for Virginia (SCHEV). Of the 25 institutions listed as peers, only three — University of Colorado Boulder, University of Florida, University of Illinois at Urbana-Champaign — had geosciences departments of similar size to our own and had publicly available student demographic data on the departmental level. Texas A&M University, also considered a SCHEV peer, had public department-level demographic data, though their student population greatly exceeds ours. Only one department, Texas A&M University, also had publicly available demographic data on their faculty. Below we compare the demographics of our department's student population with these four departments for the past four years, which is the time interval that all four departments all had data available.

The demographics of our department's current undergraduate and graduate student populations are similar to other peer departments: majority white and male (Figs 1-4). A notable exception is the University of Colorado Boulder Geological Sciences and Geophysics program, which has the most racially and ethnically diverse undergraduate population of the five institutions and is closer to the demographics of the United States (Fig 1). Also, the graduate student populations of the University of Florida and University of Colorado Boulder's departments are majority female (Fig 4).
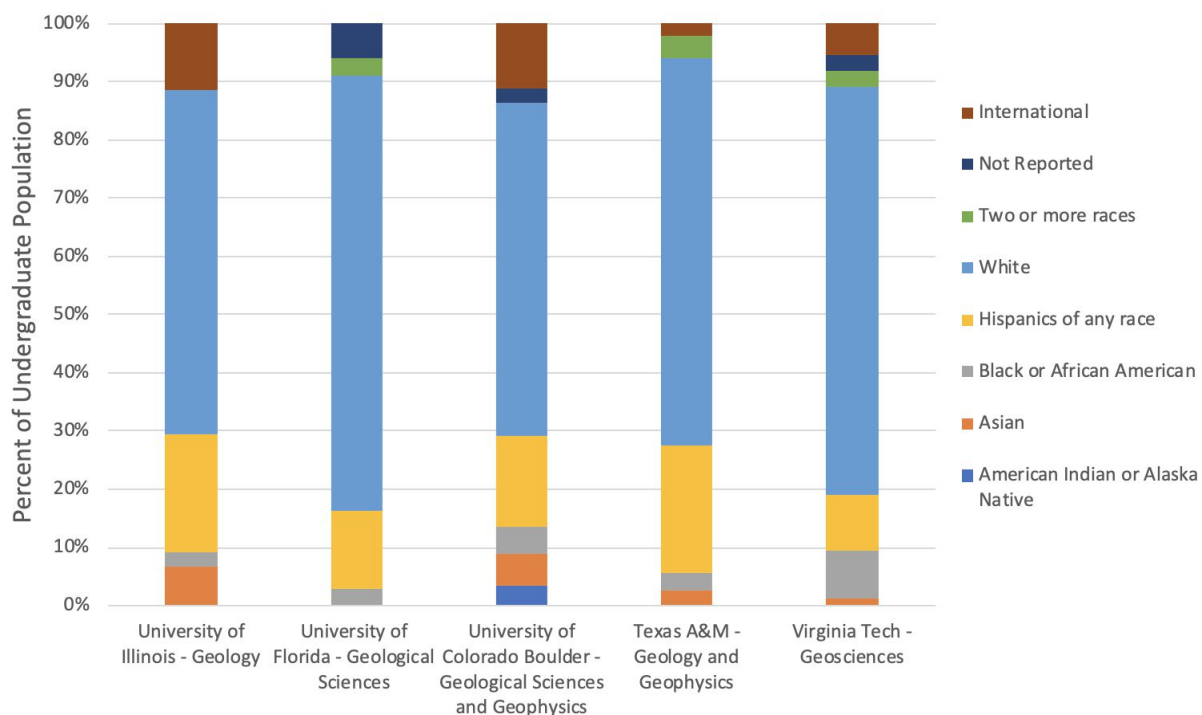

Figure 1: Racial and ethinic demographics of current undergraduate students in VT Geosciences and the four peer departments.
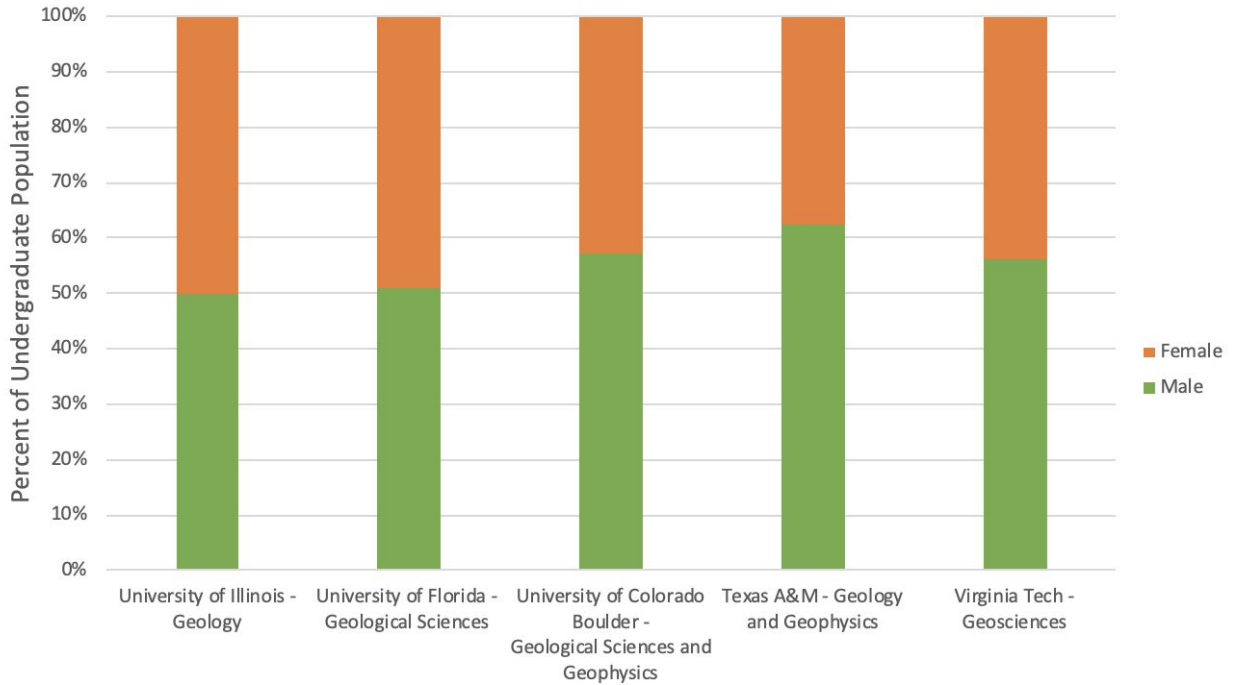
Figure 2: Gender of current undergraduate students of VT Geosciences and the four peer departments. Note that some, but not all institutions, had additional gender categories, but none of the students self-identified as one of those categories.
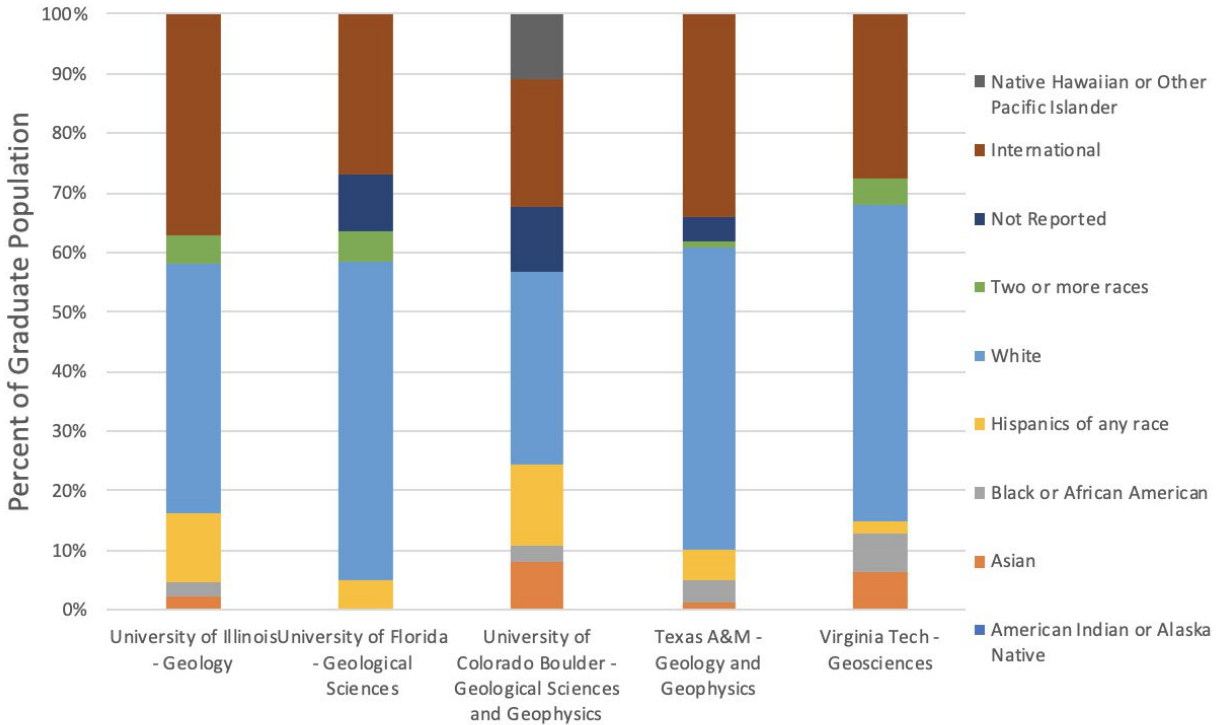

Figure 3: Racial and ethinic demographics of current graduate students of VT Geosciences and four peer departments.
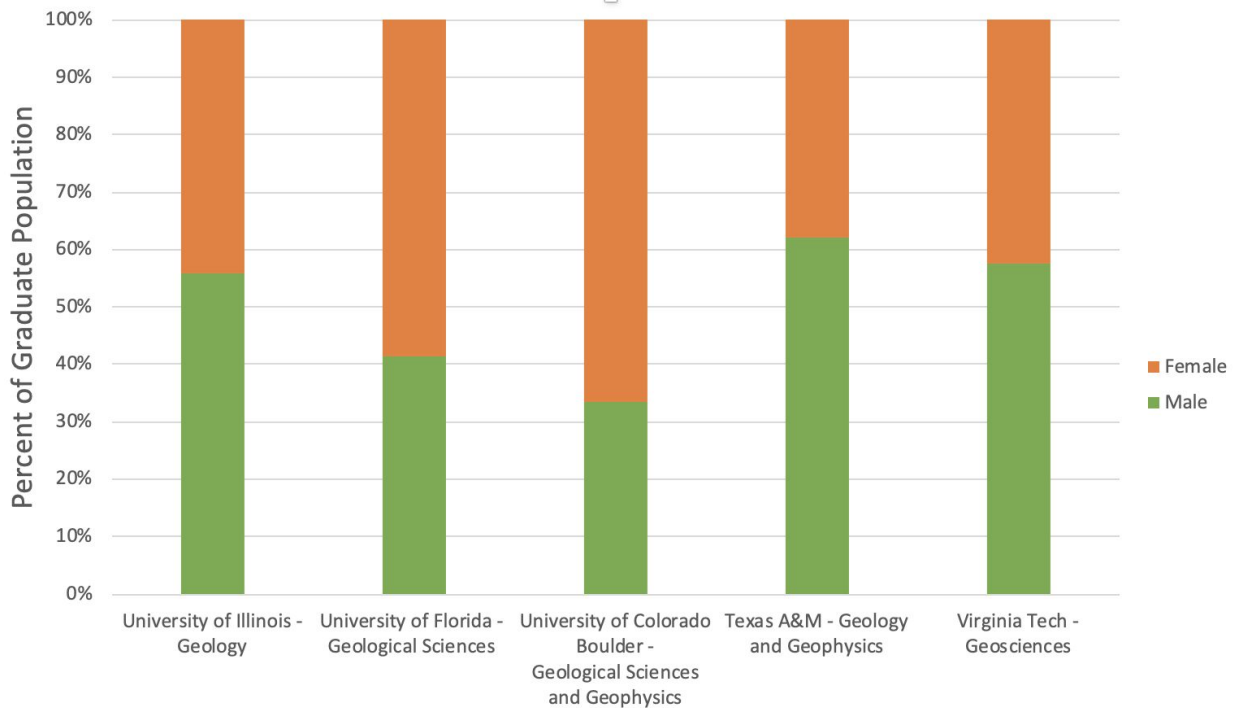
Figure 4: Gender of current graduate students in VT Geosciences and four peer departments. As with the undergraduate student data some, but not all institutions, had additional gender categories, but none of the students self-identified as one of those categories.

Virginia Tech Geosciences, along with all three peer departments, have shown a general increase in their under-represented minority (URM) undergraduate student populations over the past four years (Fig 5). Among these departments, Virginia Tech's current undergraduate student population has the second-highest portion of the population self-identified as URM at 22%. In terms of gender, the percentage of female undergraduate students in VT Geosciences has increased (Fig 6). All four peer departments have seen increases, or no net change, in their female student populations (Fig 6). Virginia Tech Geosciences' current undergraduate population was third closest to parity at 54% male and 46% female students.

For the graduate student populations, all five departments all also have shown slight increases in diversity over the past four years (Fig 5). Among the five departments, Virginia Tech Geosciences' current graduate population ranked 4th in regards to the URM student population at 12%. It should be noted, however, that each department has substantial non-resident international student populations (22% to 38%) that are not considered in the calculation of under-represented minorities (Fig 3). In terms of gender, over the past four years three departments, including Virginia Tech Geosciences, have seen increases in their female graduate student population and two have seen decreases. Virginia Tech has the third-highest percentage female graduate student population at 43% (Fig 4).
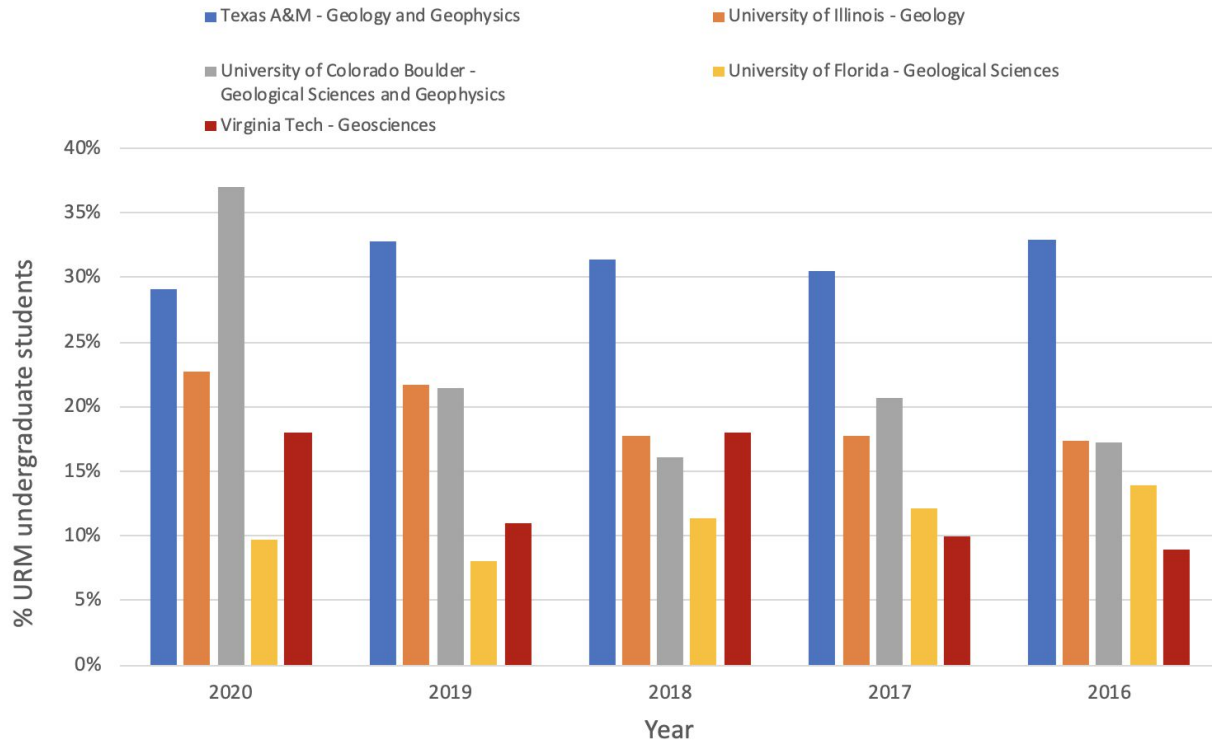
Figure 5: Percentage of undergraduate students self-identified as URM in VT Geosciences and the four peer departments over the past 5 years.
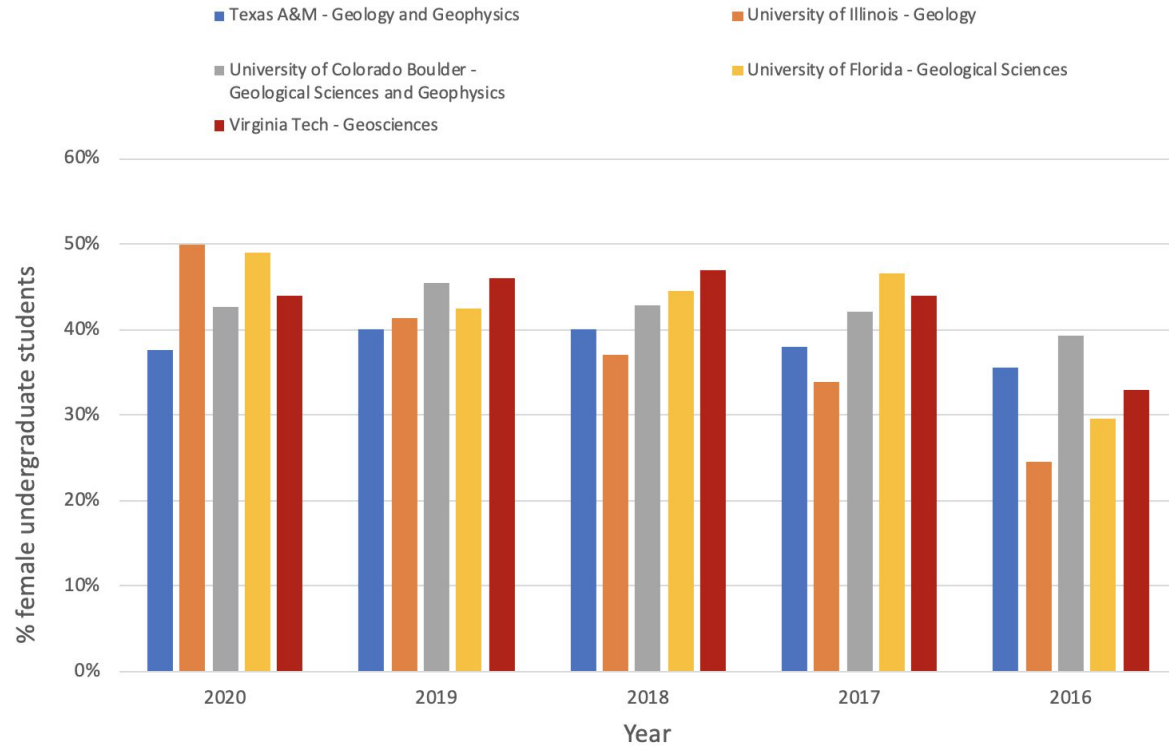

Figure 6: Percentage of female undergraduate students in VT Geosciences and the four peer departments over the past 5 years.
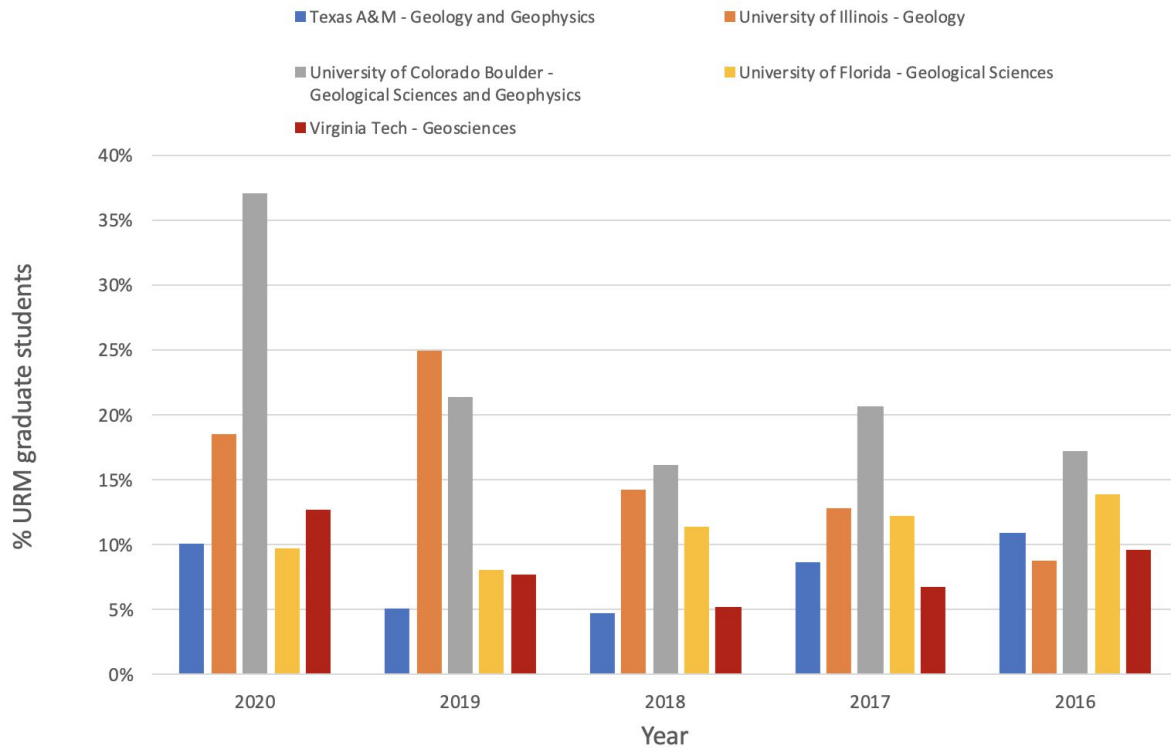
Figure 7: Percentage of graduate students self-identified as URM in VT Geosciences and the four peer departments over the past 5 years.
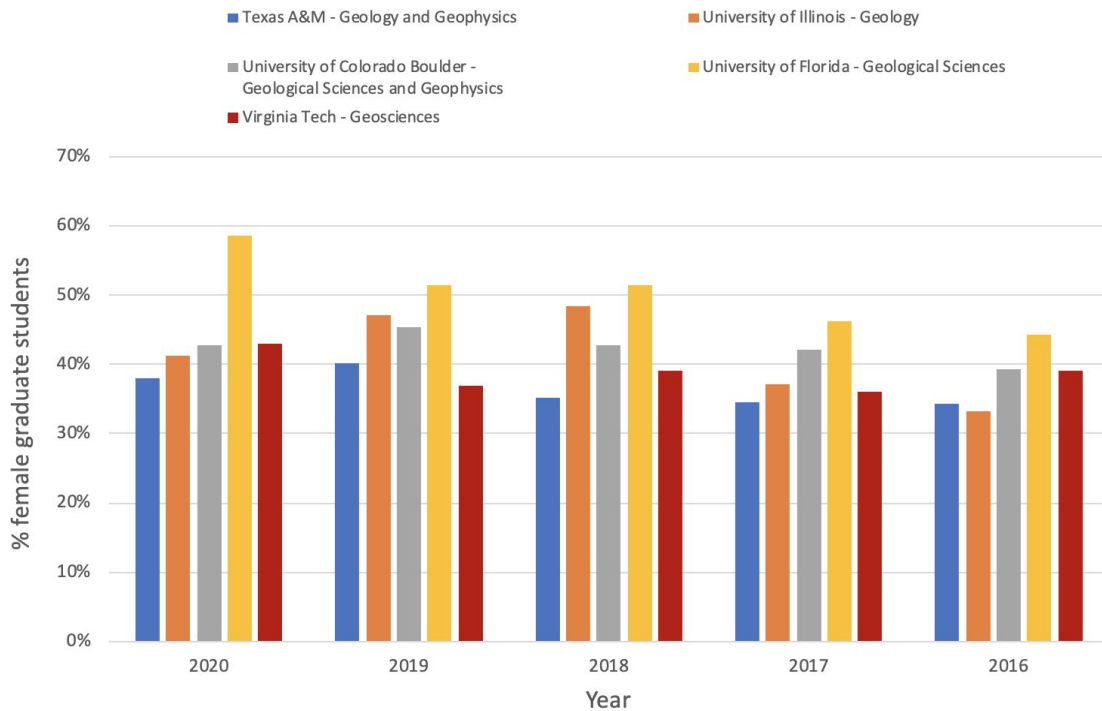

Figure 8: Percentage of female graduate students in VT Geosciences and the four peer departments over the past 5 years.

In summary, the demographics of our department's current undergraduate and graduate student populations are broadly similar to other peer departments: majority white and male. Despite this, like our peer departments, the demographics of our overall student populations are becoming more diverse; this is more apparent in the longer-term data over the past 10 years, not shown here. However, they are still far from representative of the population of the United States. The substantive change of note has been the general shift of all the student populations towards gender parity.

Public goals on demographics or increasing representation:

- The first stated goal in our department's Inclusion and Diversity Strategic Plan created in 2017 is to increase the diversity of our students, faculty, and staff.
- The stated measurable goal was just to increase diversity of our students, faculty, and staff in two to three years. No specific numerical targets were given.

Policy or proposed policy for collecting demographic data at your organization:

Collection and distribution of demographic data on the student body, faculty and staff are outlined by Virginia Tech's Policy for Standard for Administrative Data Management. All collected demographic data are made publicly available via the University DataCommons.

The Department of Geosciences' Diversity, Equity and Inclusion (DEI) committee is in charge of annually updating the department's demographic database from the University DataCommons. Going forward, demographic data on the department's seminar speakers will be collected by a survey given to each seminar speaker. The contents of this survey will be developed by the DEI committee in consultation with the department's seminar coordinator. Survey data will be added to the department's demographic database every semester.

What did you learn about other organizations (or in general) while investigating demographic data?

We learned that our institution is one of the few that has demographic data on the department/program level that is available publicly. Of our 25 SCHEV peer institutions, only 4 had publicly available demographic data on their departments and degree programs. Only one had data on the departmental level demographic data on their faculty.

In terms of diversity of our undergraduate and graduate student populations, our department is average in comparison to our peer departments. Our department's student population has grown increasingly diverse over the past 10 years. Our percent of URM students in our undergraduate population has increased from 3% to 18% over this time. The percentage of female undergraduate students has also increased from 31% to 44%. Our percent of URM students in our graduate population has increased from 3% to 9% and the percentage of female

graduate students has stayed relatively consistent at 43% to 47%. All these numbers lag behind the demographics of the United States population.

We noted from our department's undergraduate application data that our program gets a decent number of URM applicants and the majority of these students get admission offers. However, most of these students do not ultimately enroll at VT. A goal for us is to gain an understanding of why this is the case. Note that the decisions on which applicants are given offers on the undergraduate level are not controlled by our department. These decisions are controlled at the university level.

We also recognized that our current Inclusion and Diversity Strategic Plan for the department (created in 2017) needs revisiting to include more specific and measurable goals to create a more diverse and inclusive community.